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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/542,225

07/14/2005

Kenji Kono

81887.0128

3354

26021 7590 04/08/2008

HOGAN & HARTSON L.L.P.
1999 AVENUE OF THE STARS
SUITE 1400
LOS ANGELES, CA 90067

EXAMINER

HO, HUY C

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

04/08/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/542,225	Applicant(s) KONO, KENJI	
	Examiner HUY C. HO	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01/23/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 12/28/2007 with respect to claims 1-12 have been considered but are moot and not persuasive.
2. The argued features are related to a wireless communication terminal capable of reducing unnecessary idle handoff, or in other word, lessening frequency of occurrence of idle handoff when communication qualities of base stations or sectors in a base station relatively rankings of qualities frequently reverse within a short period of time (Applicant's invention disclosure background). A terminal measures signal quality and determines to handoff based on the measured result and also on a criterion of the determination of handoff, where the criterion is changed when the handoff occurs in a repetition pattern, or other word, when qualities of two pilot signals acquired back to back (or one after another or second pilot signal is continuously after the first pilot signal) are equal or greater than a predetermined value, read upon Shi (6,320,855), Andrus et al. (2003/0203735) and Petersson et al. (7,016,320) as follows.

Shi discusses method and system for initiating idle handoff in a wireless communication system, where unnecessary idle handoff are not initiated due some fleeting variation of pilot signals (see col 6 lines 15-20), thus disclosing reducing unnecessary idle handoff, or in other word, lessening frequency of occurrence of idle handoff when communication qualities of base stations or sectors in a base station relatively rankings of qualities frequently reverse within a short period of time. Shi is discussing the determination of idle handoff is based on combined computation of pilot signals from base stations with compared against some predetermined designed parameter, more particularly, the second pilot signal and the fourth pilot signal are measured and compared against a predetermined value and are used for determination of a handoff condition (see col 6 lines 30-45, col 8 lines 1-65, where Shi discusses the improved algorithm with adjustable parameters being taken into account for either initiating an idle handoff or not), Thus Shi discloses "change in a criterion when qualities of the two pilot signals acquired greater than a predetermined value".

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The remaining claimed limitations in other claims were disclosed and cited in the previous Non-final rejection and herein maintained in this Final rejection below.

As a result, the argued features were written such that they read upon the cited references.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 1-4, 6-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shi (6,320,855) and further in view of Andrus et al. (2003/0203735).**

Consider claim 1, (Original) Shi discloses a wireless communication terminal (see the abstract), comprising:

a measurement section that measures quality of a signal transmitted from a base station (col 5 lines 15-20, 50-67, col 6 lines 1-45);

a determination section that determines whether or not handoff is to be performed based on a measurement result of the measurement section and a criterion of the determination of the handoff (col 5 lines 15-20, 50-67, col 6 lines 1-45, col 8 lines 50-65, an improved designed parameter M and N being introduced besides a conventional handoff parameter H); and

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a handoff section that performs the handoff based on a determination result of the determination section (col 5 lines 15-20, 50-67, col 6 lines 1-45),

wherein the determination section changes the criterion of the determination of the handoff when the handoff section performs the handoff (col 5 lines 15-20, 50-67, col 6 lines 1-45, col 7 lines 30-67, col 8 lines 1-65).

Shi does not show a repetition pattern. Andrus discloses a repetition pattern (see sections [6], [27]).

Since both Shi and Andrus teach method and system for idle handoff, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the teachings of Shi, and have repetition pattern, taught by Andrus, to improve the method and apparatus for idle handoff with neighbor channel, as discussed by Andrus (see sections [1]-[10]).

Consider claim 7, (Previously presented) Shi discloses a handoff determination method of a wireless communication terminal which performs wireless communication using each of a first communication method and a second communication method and enables to be in an idle state condition with both methods (see the abstract), the handoff determination method comprising the steps of:

measuring quality of a signal transmitted from a base station (col 5 lines 15-20, 50-67, col 6 lines 1-45);

determining whether or not a handoff is to be performed based on a measurement result and a criterion of the determination of the handoff (col 5 lines 15-20, 50-67, col 6 lines 1-45, col 8 lines 50-65, an improved designed parameter M and N being introduced besides a conventional handoff parameter H);

performing the handoff based on a determination result (col 5 lines 15-20, 50-67, col 6 lines 1-45); and

changing the criterion of the determination of the handoff when the handoff section performs the handoff ((col 5 lines 15-20, 50-67, col 6 lines 1-45, col 8 lines 50-65).

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Shi does not show a repetition pattern. Andrus discloses a repetition pattern (**see sections [6], [27]**).

Since both Shi and Andrus teach method and system for idle handoff, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the teachings of Shi, and have repetition pattern, taught by Andrus, to improve the method and apparatus for idle handoff with neighbor channel, as discussed by Andrus (**see sections [1]-[10]**).

Consider claims 2, 8, (Original) The wireless communication terminal according to claims 1, 7, Shi, as modified by Andrus, further discloses wherein the determination section changes the criterion of the determination of the handoff when a predetermined repetition of two pilot signals is acquired (**col 7 lines 30-67, col 8 lines 1-65**).

Consider claims 3, 9, (Original) The wireless communication terminal according to claims 2, 8 Shi, as modified by Andrus, discloses wherein when qualities of the two pilot signals acquired repeatedly are equal to or greater than a predetermined value, the criterion of the determination of the handoff is changed (**sections [27]-[28]**).

Consider claims 4, 10, (Original) The wireless communication terminal according to claims 1, 7, Shi, as modified by Andrus, further discloses:

a detection section that detects time during which a preceding pilot signal is acquired every time handoff is performed, wherein the determination section changes the criterion of the determination of the handoff based on the time detected by the detection section (**col 7 lines 5-65**).

Consider claims 6, 12, (Original) The wireless communication terminal according to any one of claims 1 to 5, or claims 7 to 11, Shi, as modified by Andrus, further discloses wherein the wireless communication terminal enables to be in an idle state condition with both methods of cdma2000 lx method and lxEVDO method, and the determination section is used as section for determining a handoff of cdma2000 lx method (**col 6 lines 60-67, col 7 lines 1-30**).

4. **Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shi (6,320,855) and further in view of Petersson et al. (7,016,320).**

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Consider claim 5, (Currently amended) Shi discloses a wireless communication terminal comprising:

a measurement section that measures quality of a signal transmitted from a base station (col 5 lines 15-20, 50-67, col 6 lines 1-45);

a determination section that determines whether or not handoff is to be performed based on a measurement result of the measurement section and a criterion of the determination of the handoff (col 5 lines 15-20, 50-67, col 6 lines 1-45, col 8 lines 50-65, an improved designed parameter M and N being introduced besides a conventional handoff parameter H); and

a handoff section that performs the handoff based on a determination result of the determination section (col 5 lines 15-20, 50-67, col 6 lines 1-45),

wherein the determination section determines whether or not the handoff is to be performed based on a value obtained by the measurement result of the measurement section ~~immediately after a prior handoff is performed~~, for a predetermined period, and determines whether or not the handoff is to be performed based on a value obtained by the measurement result of the measurement section ~~after a lapse of a predetermined period since the prior handoff is performed~~ through a predetermined number of measurement (col 5 lines 15-20, 50-67, col 6 lines 1-45, col 7 lines 5-67, col 8 lines 1-67, col 9 lines 1-45).

Shi does not show time-averaging, number-averaging (col 6 lines 37-45, col 8 lines 45-67, col 17 lines 30-45, col 18 lines 15-30, col 20 lines 25-40).

Since both Shi and Petersson teach method and system for handoff, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the teachings of Shi, and have time-averaging, number-averaging, taught by Petersson, to improve the method and system for carrying out inter-frequency measurement between mobile stations and base stations in a communication system, as discussed by Petersson (see col 1 lines 9-67, col 2 lines 1-67, col 3 lines 1-35, col 4 lines 20-67).

Consider claim 11, (Currently amended) Shi discloses a handoff determination method comprising the steps of:

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measuring quality of a signal transmitted from a base station (col 5 lines 15-20, 50-67, col 6 lines 1-45);

determining whether or not a handoff is to be performed based on a measurement result and a criterion of the determination of the handoff (col 5 lines 15-20, 50-67, col 6 lines 1-45, col 8 lines 50-65, an improved designed parameter M and N being introduced besides a conventional handoff parameter H); and

performing the handoff based on a determination result, wherein whether or not the handoff is to be performed is determined based on a value obtained by the measurement result of the measurement section ~~immediately after a prior handoff is performed~~, for a predetermined period, and whether or not the handoff is to be performed is determined based on a value obtained by the measurement result of the measurement section ~~after a lapse of a predetermined period since the prior handoff is performed~~ through a predetermined number of measurement (col 5 lines 15-20, 50-67, col 6 lines 1-45, col 7 lines 5-67, col 8 lines 1-67, col 9 lines 1-45).

Shi does not show time-averaging, number-averaging (col 6 lines 37-45, col 8 lines 45-67, col 17 lines 30-45, col 18 lines 15-30, col 20 lines 25-40).

Since both Shi and Petersson teach method and system for handoff, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the teachings of Shi, and have time-averaging, number-averaging, taught by Petersson, to improve the method and system for carrying out inter-frequency measurement between mobile stations and base stations in a communication system, as discussed by Petersson (see col 1 lines 9-67, col 2 lines 1-67, col 3 lines 1-35, col 4 lines 20-67).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUY C. HO whose telephone number is (571)270-1108. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc Nguyen can be reached on 571-272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Duc Nguyen/
Supervisory Patent Examiner, Art Unit 2617